

**GREENBLUM & BERNSTEIN, P.L.C.**  
**Intellectual Property Causes**  
**1950 Roland Clarke Place**  
**Reston, VA 20191**  
**(703) 716-1191**



Attorney Docket No. P20635

In re application of : Almut KRIEBEL et al.

Serial No. : 09/832,873

Group Art Unit: 1731

Filed : April 12, 2001

Examiner: M. Alvo

For : PROCESS FOR DISPERSING A FIBROUS PAPER STOCK AND DEVICE FOR PERFORMING THE PROCESS

COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Transmitted herewith is a Appeal Brief Under 37 C.F.R. § 1.192 (in trip.) in the above-captioned application.

- \_\_\_ Small Entity Status of this application under 37 C.F.R. 1.9 and 1.27 has been established by a previously filed statement.
- \_\_\_ A verified statement to establish small entity status under 37 C.F.R. 1.9 and 1.27 is enclosed.
- \_\_\_ An Information Disclosure Statement, PTO Form 1449, and references cited.
- \_\_\_ No additional fee is required.
- \_\_\_
- \_\_\_

The fee has been calculated as shown below:

Claims After Amendment	No. Claims Previously Paid For	Present Extra	Small Entity		Other Than A Small Entity	
			Rate	Fee	Rate	Fee
Total Claims: 16	20	0	x 9=	\$	x 18=	\$0.00
Indep. Claims: 1	3	0	x 42=	\$	x 84=	\$0.00
Multiple Dependent Claims Presented			+140=	\$	+280=	\$0.00
Appeal Brief fee				\$		\$320.00
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Neil F. Greenblum  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants : Almut KRIEBEL et al. )  
 ) Group Art Unit: 1731  
Appln. No. : 09/832,873 )  
 ) Examiner: M. Alvo  
Filed : April 12, 2001 )  
 )  
For : PROCESS FOR DISPERSING A FIBROUS PAPER STOCK AND  
DEVICE FOR PERFORMING THE PROCESS

**APPEAL BRIEF UNDER 37 C.F.R. § 1.192**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This appeal is from the Examiner's final rejection of claims 1 - 16 as set forth in the Final Official Action of October 21, 2002.

A Notice of Appeal in response to the October 21, 2002 Final Office Action was filed March 21, 2003, along with a Request for a Two-month Extension of Time. Further, the instant Appeal Brief is being timely submitted within two months of the date of the Notice of Appeal, i.e., by May 19, 2003 (May 18, 2003 being a Sunday).

The requisite fee under 37 C.F.R. 1.17(c) in the amount of \$ 320.00 for the filing of the Appeal Brief is being paid by check submitted herewith. However, if for any reason the necessary fee is not associated with this file, the Commissioner is authorized to charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No.

This appeal brief is being submitted in triplicate, pursuant to 37 C.F.R. 1.192(a).

**(1) REAL PARTY IN INTEREST**

The real party in interest is Voith Paper Patent GmbH by an assignment recorded in the U.S. Patent and Trademark Office on June 14, 2001 at Reel 011896 and Frame 0022.

**(2) RELATED APPEALS AND INTERFERENCES**

No related appeals and/or interferences are pending.

**(3) STATUS OF THE CLAIMS**

Claims 1 - 16, the only claims pending in the instant application, stand finally rejected.

**(4) STATUS OF THE AMENDMENTS**

No amendments have been entered subsequent to the October 21, 2002 Final Office Action.

**(5) SUMMARY OF THE INVENTION**

The instant invention is directed to a process and device for dispersing fibrous paper stock. The process includes providing an aqueous fibrous paper stock, pressing out some of the water to form a highly consistent coarse fibrous paper stock, transporting the highly consistent coarse fibrous paper stock into a dispersing machine, and dispersing the highly coarse fibrous paper stock with a dispersing machine. The dispersing machine includes at least two dispersing fittings (tools, elements), which have several interlocking lines of teeth

and are movable relative to one another at a distance so as to disperse the highly consistent fibrous paper stock. (Specification paragraph [0002] “Field of the Invention). According to an exemplary embodiment of the invention, before dispersing the highly coarse fibrous paper stock, the highly consistent coarse fibrous stock is introduced into an effective area of a rotating mallet roll having circulating mallets, which cooperate with fixed peripheral impact sections to loosen and distribute the highly consistent fibrous stock. (Specification paragraph [0006]). In this way, a highly consistent plug formed in a worm extruder is broken up to ensure even dispersing. (Specification paragraph [0005]).

Dispersing processes and apparatuses known in the art rely upon an even flow of stock. Further, these process and apparatuses have utilized worm extruders to thicken the stock to be forwarded to the dispersing apparatuses. As is well known, a plug of material is produced by these worm extruders, which breaks into chunks or pieces as it exits the worm extruder. However, as these chunks or pieces are quite large, when they are forwarded to the dispersing apparatus, an uneven stock flow results.

To avoid the above-noted drawbacks of the prior art, the instant invention includes a mallet (hammer) roll 1 with moving mallets (hammers) 2 mounted in a circulating manner. Mallet roll 1 cooperates with impact sections 3 fixedly mounted at the periphery, i.e., the housing of a distribution device 9, so that a breaking up of the large chunks or pieces occurs prior to dispersing the fibrous material stock. After treatment in mallet roll 1, the highly

consistent fibrous stock S3 moves through a drop funnel 11 to a screw conveyer 7 installed immediately in front of dispersing machine 4 to convey fibrous stock S3 into a central area so that it arrives between dispersing fittings 5 and 6 and is dispersed. While these dispersing fittings are particularly effective, they require as even a stock flow as possible for an even dispersion, which is provided by the instant invention. (Specification paragraph [0031]; and Figure 1).

In accordance with the exemplary embodiment, mallet roll 1 has a length L and a number of mallets (hammers) 2 whose outer ends rotate in a circle having a diameter D. Impact sections 3 are also included, which are mounted to the housing. In this manner, the incoming coarse fibrous paper stock, i.e., the plug or pieces, is broken up with a relatively small amount of force, since the fibrous paper stock is only compressed and merely needs to be loosened. Further, it is noted that distances a between axially neighboring fixed impact sections 3 are selected to prevent the passing of stock chunks that are not been sufficiently broken up. (Specification paragraph [0034]; and Figure 3).

**(6) ISSUES**

**(A) Whether Claims 1 - 16 are Indefinite;**

**(B) Whether Claims 1, 5 - 7, and 13 - 16 are Improperly Rejected Under 35 U.S.C. § 103(a) as Unpatentable Over WO 96/18769 [hereinafter "WO '769"] in view of French Patent Application No. 1,239,047 [hereinafter "FR '047"] or**

**French Patent Application No. 2,364,289 [hereinafter “FR ‘289”];**

**(C) Whether Claims 2 - 4 are Improperly Rejected Under 35 U.S.C. § 103(a) as Unpatentable Over WO ‘769 in view of FR ‘047 or FR ‘289 and further in view of German Patent Application No. 197 12 653 [hereinafter “DE ‘653”]; and**

**(D) Whether Claims 8 - 12 are Improperly Rejected Under 35 U.S.C. § 103(a) as Unpatentable Over WO ‘769 in view of FR ‘047 or FR ‘289 and further in view of DAVENPORT (U.S. Patent No. 6,045,070) with or without DE ‘653.**

**(7) GROUPING OF CLAIMS**

For the purpose of this appeal, Appellants submit that none of the claims stand or fall together. Therefore, each of claims 1 - 16 are separately patentable for the reasons set forth hereinbelow.

**(8) ARGUMENT**

**(A) The Formal Rejection of Claims 1 - 16 Under 35 U.S.C. § 112, Second Paragraph, is in Error and Should be Reversed.**

In Appellant’s January 21, 2003 Response Under 37 C.F.R. 1.116, Appellant explained that the “mallet roll” disclosed in the instant application are structurally similar to what are conventionally referred to as hammer rolls, and that the “mallet” *per se* would not necessary differ structurally from the “hammer.”

Further, Appellant notes that, as paragraph [0031] of the instant application parenthetically equates the terms “mallet roll” and “hammer roll,” there should be no

confusion to one ordinarily skilled in the art in readily determining the scope of the claims subsequent to a review of the disclosure from the claims as written. Therefore, Appellants submit that the claims clearly and unambiguously recite the subject matter that the inventor regards as his invention.

Accordingly, Appellant requests that the Board reverse the rejection and indicate that all claims are fully in compliance with the requirements of the statute.

**(B) The Rejection of Claims 1, 5 - 7, and 13 - 16 Under 35 U.S.C. § 103(a) Over WO '769 in view of FR '047 or FR '289 is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that WO '769 shows a system delivering an aqueous stock, pressing out water to form a highly consistent stock, introducing the stock in a predisperser to loosen and distribute the stock, transporting the stock from the predisperser to a second disperser, but fails to disclose a mallet roll. The Examiner further asserts that FR '047 discloses that a disk disperser and a mallet roll are alternative apparatuses for dispersing stock, that FR '289 shows a mallet roller dispersing stock, and that it would have been obvious to modify WO '769 to change the disk disperser to a mallet roll. The Examiner has also asserted that, since WO '769 discloses that the grinder is formed by disperser disks, it would have been obvious to replace the disperser of FR '047, and then to modify the disperser of FR '047 with the kneader of FR '047. Appellant traverses the Examiner's

assertions.

By way of review, the present invention is directed to process in which, after the removal of water from an aqueous fibrous paper stock to form a highly consistent coarse paper stock, the highly consistent stock is loosened and distributed by introducing the highly consistent stock into an effective area of a mallet roll having circulating mallets, thereby breaking up the highly consistent stock, and subsequently dispersing the loosened and distributed highly consistent stock in a dispersing machine. Appellant submits that no proper combination of the applied documents teaches or suggests the above-noted features.

Appellant notes that WO '769 discloses a device for grinding a particulate material, which includes a grinder and a disperser. Further, WO '769 discloses that the grinder can be a disc disperser, and, on page 2, second full paragraph of WO '769, it is disclosed that the grinder is utilized to produce particles "that are so small" that rapid heating of the particles is possible. Moreover, the third and fourth full paragraphs of page 2 of WO '769 discloses that this disperser (grinder) is used as a rapidly rotating shredder, such that "the size of the pulp particles will be reduced" in order to enable rapid and thorough heating of the reduced sized particles.

As acknowledged by the Examiner, WO '769 fails to teach or suggest the use of a mallet roll, positioned prior to the disperser, that loosens and distributes highly consistent stock, as recited in at least independent claim 1. Moreover, Appellants note that, in contrast



to the instant invention, which provides a mallet roll to *break up* or *break apart* highly consistent stock in the form of a plug before processing to stock in a disperser, WO '769 provides a grinder 1 to *shred* the material entering the grinder in *reduce the size of the pulp particles* before forwarding the stock to a disperser 8 to carry away impurities. Thus, in addition to failing to teach or suggest a mallet roll, as recited in the pending claims, grinder 1 of WO '769 arranged in front of disperser 8 processes the stock in a manner wholly inconsistent with the mallet roll recited in the claims.

Because WO '769 fails to teach or suggest the use of a mallet roll, as recited in at least independent claim 1, the Examiner has applied FR '047 for purportedly disclosing that a mallet roll and a disc disperser are known alternatives for each other, and, therefore, that it would have been obvious to replace grinder 1 of WO '769, which can be a disc disperser, with a mallet roll.

Appellants submit that this assertion is not based upon any teachings in the art. In particular, Appellants note that, while disclosing a processing arrangement in which stock is kneaded, FR '047 teaches that a disperser and a kneader roll (either horizontally or vertically oriented) can be used interchangeably. However, contrary to the Examiner's assertions, FR '047 fails to teach or suggest that this interchangeability is universal, or that such interchangeability would extend beyond the limited use of kneading stock disclosed in FR '047.

Appellant notes that the Examiner has mistaken the kneading devices of FR '047 for a mallet roll. While structurally similar, the kneading devices (as well as the disperser) of FR '047 are structured to knead the stock suspension, i.e., to massage or mix the stock, whereas a mallet roll, as disclosed in the instant application, is directed to breaking up or apart a plug of highly consistent stock. Thus, Appellants submit that, as the kneading device of FR '047 is intended to operate on different materials and in a manner distinct from that of the mallet roll recited in at least independent claim 1, it would not have been obvious for one ordinarily skilled in the art to utilize such a kneading device in the manner of the mallet roll recited in the pending claims.

Further, Appellants note that it would not have been obvious to one ordinarily skilled in the art to modify WO '769 to replace grinder 1 with the kneading device disclosed by FR '047. In particular, Appellants note that FR '047 fails to provide any teaching or suggestion that the kneading devices (or the alternative disperser) are structured or arranged to reduce particle size, as is the purpose of the grinder/disperser of WO '769. Moreover, as FR '047 specifically teaches that the kneading devices are intended merely to knead/mix stock, the asserted modification of the kneading device of FR '047 for the grinder of WO '769 would prevent WO '769 from operating in its intended manner. That is, if modified in the manner asserted by the Examiner, the kneading device would not be able to reduce the particle size of the pulp in order to facilitate heating.

Because the asserted modification would render the primary document incapable of operating in its intended manner, Appellants submit that the art of record fails to provide the requisite motivation or rationale for combining the art of record in manner asserted by the Examiner.

Thus, because the kneader/disperser of FR '047 is structured and utilized for a wholly different purpose than the grinder/disperser of WO '769, Appellant submits that it would not have been obvious to one ordinarily skilled in the art to modify WO '769 in the manner asserted by the Examiner. Further, Appellant submits that, even assuming, *arguendo*, that there were a teaching that it would have been obvious to substitute the kneader/disperser of FR '047 for the grinder/disperser of WO '769, which Appellant submits there is not, because the kneader/disperser is not structured to shred or reduce particle size, the asserted modification would have been contrary to the express disclosure and intended operation of WO '769, which requires that particle size be reduced to ensure rapid and thorough heating.

Therefore, Appellant submits that the art of record fails to provide any teaching or suggestion for replacing the grinder of WO '769 with the kneading device disclosed by FR '047 as asserted by the Examiner. Moreover, because the assertedly alternative devices are utilized for wholly distinct purposes and process the stock in wholly different manners, Appellant submits that the only reasonable rationale for combining the art of record in the manner set forth by the Examiner is for a review of Appellant's disclosure and the use of

improper hindsight in recreating Appellant's invention. Thus, Appellant submits that the asserted combination of documents is improper and renders the rejection improper.

In establishing a *prima facie* case of obviousness under 35 U.S.C. § 103, it is incumbent upon the Examiner to provide a reason *why* one of ordinary skill in the art would have found it obvious to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. *See Ex parte Clapp*, 227 USPQ 972 (B.P.A.I. 1985) To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Appellant's disclosure. *See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Notwithstanding the Examiner's statement in the rejection that it would have been obvious to substitute the mallet roller disperser of FR '047 for the disk disperser of WO '769 "as they perform the same function of pre-dispersing and shredding the paper stock." (Final Office Action, bridging paragraph pages 2 and 3). Appellants contend that, as shown above, the kneading device of FR '047 and the grinder of WO '769 process stock in entirely distinct manners, such that the Examiner's statement would not constitute a reason *why* one of ordinary skill in the art would have been led to replace the grinder of WO '769 with a kneading device of FR '047.

Moreover, it is respectfully submitted that the courts have long held that it is impermissible to use Appellants' claimed invention as an instruction manual or "template"

to piece together teachings of the prior art so that the claimed invention is purportedly rendered obvious. *See In re Fritch*, 972 R.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). However, the Examiner has not set forth any reasonable rationale as to why one ordinarily skilled in the art would combine the documents of the record in the asserted manner.

Appellant further notes that the Examiner alternatively or additionally applied FR ‘289 for purportedly showing a mallet roll for dispersing paper stock, and asserting that it would have been obvious to replace the grinder/disperser of WO ‘769 with the mallet roll of FR ‘289.

Contrary to the Examiner’s assertions, FR ‘289 does not process “paper stock” as asserted by the Examiner, but instead is directed to a system for treating woodchips (*copeaux*). Appellant notes that it is well known that woodchips get their relatively high degree of strength from the natural strength of the wood, and that the woodchip refiner of FR ‘289 utilizes two rotating refiner discs, thereby breaking up the woodchips into smaller chips. Thus, this device operates to *chop* the wood chips into smaller chips.

Thus, while the chopper of FR ‘289 and the grinder of WO ‘769 are generally utilized to break up a particular product into pieces, Appellant notes that woodchips, as refined or chopped in FR ‘289, and particulate matter in a suspension, as ground or shredded in WO ‘769, are wholly distinct materials, which are processed in wholly different manners. As

such, Appellants submit that there is no teaching or suggestion that either of these devices could be substituted for the other and still operate in the intended manner. Further, if it is the Examiner's intention to replace the second disk disperser of WO '769 with the woodchip chopper of FR '289, the reasons for such a modification become even more tenuous.

In particular, Appellants submit that the art of record fails to provide any suggestion that, upon replacing the grinder of WO '769 with the woodchip chopper of FR '289, the woodchip chopper would grind the particulate matter in a suspension to reduce the particle size for delivery to the disperser. Because there is no suggestion that WO '769 would operate in its intended manner, and, in fact, the suggestion would be that WO '769 would not operate in its intended manner after the asserted modification, the asserted combination is improper and should be withdrawn. Moreover, because the second disk disperser is intended to operate only after the particle size has been reduced by grinding the solid matter in the suspension, Appellants submit that there is certainly no suggestion for replacing such a dispersing device with a woodchip chopper, since the woodchip form has long since been eliminated from the stock materials.

Notwithstanding that WO '769 indicates that the particulate matter can include wood fiber pulp in the suspension, Appellant notes that, while the wood fiber pulp treated in WO '769 can be formed as the result of a process that includes FR '289 along with additional processing, e.g., delignification and the addition of water to form a suspension, it would not

have been obvious to one ordinarily skilled in the art to modify the grinder/disperser of WO '769 with the refiner/chopper of FR '289, since these device are specially intended to process different materials, or at least different states of the same material.

Moreover, Appellant notes that the blades of FR '289 are rotated at high speed such that the woodchips falling into the chute with the rotating blades are chopped up into smaller chips. Thus, while it is apparent that these rotating blades of FR '289 would chop/refine solid matter into smaller pieces, there is no teaching or suggestion that such blades rotating within a fibrous suspension would reduce the size of the particulate matter in the suspension, which is the intention of WO '769, nor is there any suggestion that such rotating blade would perform the intended dispersing of the second disk disperser.

In this regard, Appellants note that, as the suspension to be processed in WO '769 is a rather thick suspension, it is not apparent that the blade system of FR '289, which is intended to be operated in the air, would be able to generate the necessary force to process the particles in the suspension when operated within the WO '769 suspension.

Still further, Appellants note that, as FR '289 is intended for use with materials that are wholly distinct from those intended to be processed by the kneading device of FR '047, Appellants submit that the art of record fails to provide the necessary motivation or rationale to render the asserted modification of WO '769 with one or both of FR '047 and FR '289 obvious under 35 U.S.C. § 103(a).

Therefore, Appellants submit that the art of record fails to provide any teaching or suggestion for combining WO '769 and FR '047 and/or FR '289 in the manner asserted by the Examiner. Moreover, because the assertedly alternative devices are utilized for processing wholly distinct materials, Appellants submit that the only reasonable rationale for combining the art of record in the manner set forth by the Examiner is for a review of Appellants' disclosure and the use of improper hindsight in recreating Appellant's invention. Thus, Appellants submit that the asserted combination of documents is improper and renders the rejection improper.

Rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

In view of the varied processing procedures intended from each of the applied processes, and



in view of the fact that none of the processes are intended to process a same material in the same way, Appellants submit that it is apparent that the only reason to combine the teachings of the applied references in the manner proposed by the Examiner results from a review of Appellants' disclosure and the application impermissible hindsight.

Still further, Appellant notes that none of the applied documents teach or suggest a mallet roll having circulating mallets extending from a rotating shaft which cooperate with fixed peripheral impact sections, thereby breaking up the highly consistent stock passing between the mallets and the fixed peripheral impact sections, as recited in at least independent claim 1.

In this regard, it is noted that it is undisputed that WO '769 certainly does not disclose a mallet roll. Moreover, while the kneading device of FR '048 is structurally similar to the recited mallet roll, FR '048 is operated in a manner in which a suspension enters and exits the device, and in between the suspension is kneaded/mixed. Thus, there is certainly no suggestion that it would have been obvious to utilize the kneading device of FR '048 to break up highly consistent stock in the manner recited in at least independent claim 1.

Still further, while FR '289 discloses rotating blades for breaking up wood chips, Appellant submits that the applied art fails to identify the problem to be addressed by the present invention, i.e., that the dewatered highly consistent stock is in the form of a plug which does not enable optimum dispersing in the disperser. Thus, the art of record fails to

provide any teaching or suggestion for utilizing a device such as FR '289 in combination with a disperser, in the manner recited in at least independent claim 1.

Accordingly, Appellant submits that, as none of the applied documents teaches or suggests a mallet roll arranged to break up highly consistent stock prior to forwarding the same to a disperser device, no proper combination of the applied art teaches or suggests the combination of features recited in at least independent claim 1.

Accordingly, Appellants request that Examiner reconsider and withdraw the rejection of at least independent claim 1. Moreover, Appellants submit that claims 6, 7 and 13 - 16 are separately patentable over the art of record. In particular, Appellants note that none of the applied documents teach or suggest the worm extruder recited in claims 6 and 7, which produces the plug the of material to be broken up by the mallet roll. Further, while WO '769 discloses heating the suspension in a screw conveyor, there is no teaching or suggestion for adding steam to the material in the dispersing device, as recited in claims 13 - 16.

Because the applied art fails to teach or suggest the combination of features recited in at least claims 6, 7, and 13 - 16, Appellants submit that these claims are separately patentable over the art of record.

Further, Appellants submit that claim 5 is allowable at least for the reason that it depends from an allowable base claim. Moreover, Appellants submit that claim 5 is separately patentable because it recites additional features that further defines the present

invention. In particular, Appellants submit that no proper combination of WO '769 in view of FR '047 and/or FR '289 teaches or suggests, *inter alia*, the mallet roll is essentially horizontally positioned, and said process further comprises introducing the fibrous stock into the effective area of the mallet roll from above, as recited in claim 5.

Accordingly, Appellants request that the Board reverse the Examiner's decision to finally reject claims 1, 5 - 7 and 13 - 16 under 35 U.S.C. § 103(a) and remand the application to the examining group for early allowance.

**(C) The Rejection of Claims 2 - 4 Under 35 U.S.C. § 103(a) Over WO '769 in view of FR '047 or FR '289 and further in view of DE '653 is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that, while WO '769 does not provide specifics about the disperser, DE '653 shows details of a disperser, and that it would have been obvious to modify the asserted combination of documents to include the details of the disperser of DE '653. Appellant traverses the Examiner's assertions.

Appellants note that, as DE '653 is directed to the dispersing machine *per se*, this document fails to provide any teaching or suggestion of the subject matter noted above as deficient in the asserted combination of WO '769 in view of FR '047 and/or FR '289.

In particular, Appellants note that DE '653 fails teach or suggest the requisite

motivation or rationale for combining the above-noted documents in the manner asserted by the Examiner. That is, DE '653 fails to suggest that it would have been obvious to replace a grinder such as disclosed by WO '769 with a kneading machine, as taught by FR '047, or with woodchip chopper with rotating blades, as taught by FR '289, since neither secondary document suggests operating in the manner intended by the grinder of WO '769 of reducing pulp size to facilitate heating.

Further, Appellants submit that, like the other applied documents, DE '653 fails to teach or suggest a mallet roll having circulating mallets *which cooperate with fixed peripheral impact sections*, thereby *breaking up the highly consistent coarse fibrous stock passing between the mallets and fixed peripheral impact sections*, as recited in at least independent claim 1. Accordingly, Appellants submit that no proper combination of WO '769, FR '047 or FR '289, and DE '653 teaches or suggests the combination of features recited in at least independent claim 1.

Further, Appellants submit that claims 2 - 4 are allowable at least for the reason that these claims depend from allowable base claims. Moreover, Appellants submit that claims 2 - 4 are separately patentable over any proper combination of the applied art because these claims recite additional features that further define the present invention. In particular, Appellants submit that no proper combination of WO '769, FR '047 and/or FR '289, and DE 653 teaches or suggests, *inter alia*, the dispersing machine comprises at least two dispersing

fittings with several lines of teeth, the at least two dispersing fittings being arranged so that the several lines of teeth are intermeshed and spaced at a distance from each other, and said process further comprises rotating the at least two dispersing fittings relative to each other, as recited in claim 2; introducing steam into the highly consistent fibrous stock while it is located between the dispersing fittings, whereby the highly consistent fibrous stock is heated, as recited in claim 3; the dispersing fittings include a primary dispersing area and a ring shaped heating zone arranged radially inside of the primary dispersing area, and said process comprises introducing the steam into the ring shaped heating zone, as recited in claim 4.

Accordingly, Appellants request that the Board reverse the Examiner's decision to finally reject claims 2 - 4 under 35 U.S.C. § 103(a) and remand the application to the examining group for early allowance.

**(C) The Rejection of Claims 2 - 4 Under 35 U.S.C. § 103(a) Over WO '769 in view of FR '047 or FR '289 and further in view of DAVENPORT with or without DE '653 is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that DAVENPORT uses a mallet roller to predisperse and shred paper stock to pieces less than 6 in prior to a disk disperser to reduce the energy required for dispersing, and that it would have been obvious to modify the asserted combination of documents to include the features of DAVENPORT with or without the features of DE '653.

As discussed above, DE '653 is directed to the dispersing machine *per se*, and, therefore, fails to provide any teaching or suggestion of the subject matter noted above as deficient in the asserted combination of WO '769 in view of FR '047 and/or FR '289.

Further, Appellants note that, while DAVENPORT discloses a shredding device for breaking up solids, this device would be utilized as a precursor device to the grinder of WO '769, not as a replacement for the grinder. In this regard, Appellants note that, in DAVENPORT, the solids are then supplied to an agitatable receiving tank 16 before being sent to a grinder. Thus, like the other secondary documents of record, DAVENPORT fails to teach or suggest that the solids supplied by the grinder are heated, as required by WO '769, and, therefore, fails to teach or suggest that the WO '769 would continue to operate in its intended manner subsequent to the Examiner's asserted modifications thereto.

Accordingly, Appellants submit that the art of record fails to teach or suggest the necessary motivation or rationale for combining the above-noted documents in the manner asserted by the Examiner. That is, neither DAVENPORT nor DE '653 suggests that it would have been obvious to replace the heatable grinder of WO '769 with either a kneading machine of FR '047 or rotating blades of FR '289.

Further, Appellants submit that, like the other applied documents, both DAVENPORT and DE '653 fail to teach or suggest a mallet roll having circulating mallets *which cooperate with fixed peripheral impact sections*, thereby *breaking up the highly consistent coarse*

*fibrous stock passing between the mallets and fixed peripheral impact sections*, as recited in at least independent claim 1. Accordingly, Appellants submit that no proper combination of WO '769, FR '047 or FR '289, and DAVENPORT with or without DE '653 teaches or suggests the combination of features recited in at least independent claim 1.

Further, Appellants submit that claims 8 - 12 are allowable at least for the reason that these claims depend from allowable base claims. Moreover, Appellants submit that claims 8 - 12 are separately patentable over any proper combination of the applied art since these claims recite additional features that further define the present invention. In particular, Appellants submit that no proper combination of WO '769, FR '047 and/or FR '289, and DAVENPORT with or without DE 653 teaches or suggests, *inter alia*, rotating the mallets at a circumferential speed in a range between about 1 to 5 m/s, as recited in claim 8; rotating the mallets at a circumferential speed of between about 2 and 4 m/s, as recited in claim 9; calibrating the highly consistent fibrous stock between impact sections positioned at a distance from each other, as recited in claim 10; adjusting a maximum amount of calibrated fibrous stock pieces in the longitudinal direction to a size in a range between about 5 to 50 mm, as recited in claim 11; and transferring a specific work amount of less than about 1kWh/t from the mallet roll to the fibrous stock, as recited in claim 12.

Accordingly, Appellants request that the Board reverse the Examiner's decision to finally reject claims 8 - 12 under 35 U.S.C. § 103(a) and remand the application to the

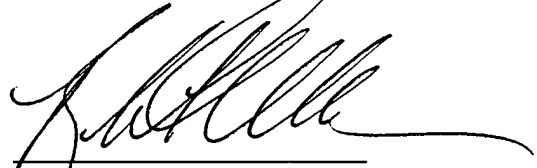
examining group for early allowance.

**(D) Conclusion**

Claims 1 - 16 are fully in compliance with the requirements under 35 U.S.C. § 112, second paragraph; claims 1, 5 - 7, and 13 - 16 are patentable under 35 U.S.C. § 103(a) over WO '769 in view of FR '047 and/or FR '289; claims 2 - 4 are patentable under 35 U.S.C. § 103(a) over WO '769 in view of FR '047 and/or FR '289 and further in view of DE '653; and claims 8 - 12 are patentable under 35 U.S.C. § 103(a) over WO '769 in view of FR '047 and/or FR '289 and further in view of DAVENPORT with or without DE '653. Specifically, the applied art of record fails to disclose or suggest the unique combination of features recited in Appellant's claims 1 - 16. Accordingly, Appellants respectfully request that the Board reverse the Examiner's decisions to finally reject claims 1 - 16 under 35 U.S.C. § 103(a) and remand the application to the Examiner for withdrawal of the rejection.

Thus, Appellant respectfully submits that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. § 103(a), and that the present application and each pending claim are allowable over the prior art of record.

Respectfully submitted,  
Almut KRIEBEL et al.



Neil F. Greenblum  
Reg. No. 28,394

*35, 813*



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May 20, 2003  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 Roland Clarke Place  
Reston, VA 20191  
(703) 716-1191

Attachments:        Appendix: Claims on Appeal

**APPENDIX A**

***CLAIMS ON APPEAL***

1. (Amended) A process for dispersing fibrous paper stock comprising:  
  
delivering an aqueous fibrous paper stock;  
  
pressing some water out of the aqueous fibrous paper stock to form a highly consistent coarse fibrous paper stock;  
  
loosening and distributing the highly consistent stock by introducing the highly consistent coarse fibrous stock into an effective area of a mallet roll having circulating mallets extending from a rotating shaft which cooperate with fixed peripheral impact sections, thereby breaking up the highly consistent coarse fibrous stock passing between the mallets and fixed peripheral impact sections;  
  
transporting the loosened and distributed highly consistent fibrous paper stock into a dispersing machine;  
  
dispersing the transported loosened and distributed highly consistent fibrous paper stock in the dispersing machine.
2. The process in accordance with claim 1, wherein the dispersing machine comprises at least two dispersing fittings with several lines of teeth, the at least two dispersing fittings being arranged so that the several lines of teeth are intermeshed and spaced at a distance from each other, and said process further comprises:  
  
rotating the at least two dispersing fittings relative to each other.

3. (Amended) The process in accordance with claim 2, further comprising:  
introducing steam into the highly consistent fibrous stock while it is located between  
the dispersing fittings, whereby the highly consistent fibrous stock is heated.

4. (Amended) The process in accordance with claim 3, wherein the dispersing  
fittings include a primary dispersing area and a ring shaped heating zone arranged radially  
inside of the primary dispersing area, and said process comprises:

introducing the steam into the ring shaped heating zone.

5. The process in accordance with claim 1, wherein the mallet roll is essentially  
horizontally positioned, and said process further comprises:

introducing the fibrous stock into the effective area of the mallet roll from above.

6. The process in accordance with claim 1, wherein a worm extruder assists in the  
pressing of water out of the aqueous fibrous paper stock.

7. (Amended) The process in accordance with claim 6, wherein a transport  
direction in the worm extruder is essentially horizontal and an axis of the rotating shaft of the  
mallet roll is essentially horizontal and substantially perpendicular to the worm extruder  
transport direction.

8. The process in accordance with claim 1, further comprising:  
rotating the mallets at a circumferential speed in a range between about 1 to 5 m/s.

9. The process in accordance with claim 8, further comprising:

rotating the mallets at a circumferential speed of between about 2 and 4 m/s.

10. The process in accordance with claim 1, further comprising:

calibrating the highly consistent fibrous stock between impact sections positioned at a distance from each other.

11. The process in accordance with claim 10, further comprising:

adjusting a maximum amount of calibrated fibrous stock pieces in the longitudinal direction to a size in a range between about 5 to 50 mm.

12. The process in accordance with claim 1, further comprising:

transferring a specific work amount of less than about 1kWh/t from the mallet roll to the fibrous stock.

13. The process in accordance with claim 1, further comprising:

dropping the fibrous stock, after passing the mallet roll, into a screw conveyor; and centrally introducing the dropped fibrous stock into the dispersing machine via the screw conveyor.

14. (Amended) The process in accordance with claim 1, further comprising heating the highly consistent fibrous stock while it is located between dispersing fittings of the dispersing machine.

15. (Amended) The process in accordance with claim 14, further comprising introducing steam between the dispersing fittings and into the highly consistent fibrous stock.

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16. (Amended) The process in accordance with claim 14, wherein the dispersing fittings include a primary dispersing area and a ring shaped heating zone arranged radially inside of the primary dispersing area, and said process comprises:

introducing the steam into the ring shaped heating zone to heat the highly consistent fibrous stock.